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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 4

Complete if Known

Application Number	10/612,224
Filing Date	July 1, 2003
First Named Inventor	Cunningham, Philip R.
Art Unit	1636
Examiner Name	Akhavan, Ramin
Attorney Docket Number	WSS-597.01

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
AS	A	US-4,772,555	09/20/1988	DeBoer, Herman	
	B	US-4,873,316	10/10/1989	Meade, H. et al.	
	C	US-5,981,280	11/09/1999	Fang, L. et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
AS	D	Calame and Eaton (1988) Transcriptional controlling elements in the immunoglobulin and T cell receptor loci. <i>Adv. Immunol.</i> 43:235-275.	
	E	Nielsen, D. A. et al. (1989) A highly sensitive, mixed-phase assay for chloramphenicol acetyltransferase activity in transfected cells. <i>Anal. Biochem.</i> Anal. Biochem. 179: 19-23.	
	F	Cunningham, P., et al. (1993) Functional effects of base changes which further define the decoding center of Escherichia coli 16S ribosomal RNA: mutation of C1404, G1405, C1496, G1497, and U1498. <i>Biochemistry</i> 32: 7172-7180.	
AS	G	Denman, R. et al. (1989) In vitro assembly of 30S and 70S bacterial ribosomes from 16S RNA containing single base substitutions, insertions, and deletions around the decoding site (C1400). <i>Biochemistry</i> 28:1002-1011.	
	H	Makosky, P. C. et al. (1987) Spectinomycin resistance at site 1192 in 16S ribosomal RNA of E. coli: an analysis of three mutants. <i>Biochimie</i> 69: 885-889.	
	I	Kurjan and Herskowitz (1982) Structure of a yeast pheromone gene (MF alpha): a putative alpha-factor precursor contains four tandem copies of mature alpha-factor. <i>Cell</i> 30:933-943.	
	J	Banerji et al. (1983) A lymphocyte-specific cellular enhancer is located downstream of the joining region in immunoglobulin heavy chain genes. <i>Cell</i> 33:729-740.	
	K	Queen, C. & Baltimore, D. (1983) Immunoglobulin gene transcription is activated by downstream sequence elements. <i>Cell</i> 33:741-748.	
	L	Kaufman et al. (1987) Translation efficiency of polycistronic mRNAs and their utilization to express heterologous genes in Mammalian Cells. <i>EMBO J.</i> 6:187-195	
AS	M	Baldari et al. (1987) A novel leader peptide which allows efficient secretion of a fragment of human interleukin 1 β in <i>Saccharomyces cerevisiae</i> ; <i>EMBO J.</i> 6:229-234	

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M	N	Winoto and Baltimore (1989) A novel, inducible and T cell-specific enhancer located at the 3' end of the T cell receptor α locus; EMBO J. 8:729-733
	O	Powers, T. et al. (1991) A functional pseudoknot in 16S ribosomal RNA; EMBO J. 10: 2203-2214
	P	Govantes, F. et al. (1998) Mechanism of translational coupling in the <i>nifLA</i> operon of <i>Klebsiella pneumoniae</i> ; EMBO J. 17(8):2368-2377
	Q	Schottel, J. L., et al. (1984) Effects of alterations in the translation control region on bacterial gene expression: use of <i>cat</i> gene constructs transcribed from the <i>lac</i> promoter as a model system; Gene 28: 177-193
	R	Yanisch-Perron, C., et al. (1985) Improved M13 phage cloning vectors and host strains: nucleotide sequences of the M13mp18 and pUC19 vectors; Gene 33:103-119
	S	Schultz et al. (1987) Expression and secretion in yeast of a 400-kDa envelope glycoprotein derived from Epstein-Barr virus; Gene 54:113-123
	T	Smith, D.B. and Johnson, K.S. (1988) Single-step purification of polypeptides expressed in <i>Escherichia coli</i> as fusions with glutathione S-transferase; Gene 67:31-40
	U	Pinkert et al. (1987) An albumin enhancer located 10 kb upstream functions along with its promoter to direct efficient, liver-specific expression in transgenic mice; Genes Dev. 1:268-277
	V	Luria, S.E. & Burrous, J.W. (1957) Hybridization between <i>escherichia coli</i> and shigella; J. Bacteriol. 74:461-476
	W	Asai, T., (1999) Construction and Initial Characterization of <i>Escherichia coli</i> Strains with Few or No Intact Chromosomal rRNA Operons; J. Bacteriol. 181: 3803-3809
	X	Voulgaris, J., et al. (1999) Increased <i>rm</i> Gene Dosage Causes Intermittent Transcription of rRNA in <i>Escherichia coli</i> ; J. Bacteriol. 181: 4170-4175
	Y	Herr, W., et al. (1979) Mechanism of Ribosomal Subunit Association: Discrimination of Specific Sites in 16S RNA Essential for Association Activity; J. Mol. Biol. 130: 433-449
	Z	Brow, D. A. & Noller, H. F. (1983) Protection of Ribosomal RNA from Kethoxal in Polyribosomes; J. Mol. Biol. 163:112-118
	AA	Hanahan, D. (1983) Studies on Transformation of <i>Escherichia coli</i> with Plasmids; J. Mol. Biol. 166:557-580
	AB	Moazed, D. & Noller, H.F. (1986) Interconversion of Active and Inactive 30 S Ribosomal Subunits is Accompanied by a Conformational Change In the Decoding Region of 16S rRNA; J. Mol. Biol. 191:483-493
	AC	Triman, K., et al. (1989) Isolation of Temperature-sensitive Mutants of 16 S rRNA in <i>Escherichia coli</i> ; J. Mol. Biol. 209:645-653
	AD	Lee, K., et al. (1997) In Vivo Determination of RNA Structure-Function Relationships: Analysis of the 790 Loop in Ribosomal RNA; J. Mol. Biol. 269:732-743
	AE	Sergiev, P. V., et al. (2000) Mutations at Position A960 of E. Coll 23 S Ribosomal RNA Influence the Structure of 5 S Ribosomal RNA and the Peptidyltransferase Region of 23 S Ribosomal RNA; J. Mol. Biol. 299:379-389
15	AF	Morosyuk S. V., et al. (2000) Structure and Function of the Conserved 690 Hairpin in <i>Escherichia coli</i> 16 S Ribosomal RNA: Analysis of the Stem Nucleotides; J. Mol. Biol. 300 (1):113-126

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AG	Vila-Sanjurjo, A. et al. (2001) Mutational Analysis of the Conserved Bases C1402 and A1500 in the Center of the Decoding Domain of <i>Escherichia coli</i> 16 S rRNA Reveals an Important Tertiary Interaction; J. Mol. Biol. 308: 457-463
AH	Morosyuk S. V., et al. (2001) Structure and Function of the Conserved 690 Hairpin in <i>Escherichia coli</i> 16 S Ribosomal RNA. II. NMR Solution Structure; J. Mol. Biol. 307 (1):197-211
AI	Morosyuk S. V., et al. (2001) Structure and Function of the Conserved 690 Hairpin in <i>Escherichia coli</i> 16 S Ribosomal RNA. III. Functional Analysis of the 690 Loop; J. Mol. Biol. 307 (1):213-228
AJ	Hui, A., et al. (1987) Directing Ribosomes to a Single mRNA Species: A Method to Study Ribosomal RNA Mutations and Their Effects on Translation of a Single Messenger in <i>Escherichia coli</i> ; Methods Enzymol. 153: 432-452
AK	Sigmund, C. D., et al. (1988) Antibiotic Resistance Mutations in Ribosomal RNA Genes of <i>Escherichia coli</i> ; Methods Enzymol. 164: 673-690
AL	Goeddel (1990) Systems for Heterologous Gene Expression; Methods Enzymol. 185:3-7
AM	Gottesman, S. (1990) Minimizing Proteolysis in <i>Escherichia coli</i> : Genetic Solutions; Methods Enzymol. 185:119-128
AN	Calos, M.P. (1978) DNA sequence for a low-level promoter of the <i>lac</i> repressor gene and an 'up' promoter mutation; Nature 274:762-765
AO	Seed, B. (1987) An LFA-3 cDNA encodes a phospholipid-linked membrane protein homologous to its receptor CD2; Nature 329:840
AP	Sigmund, C. D., et al. (1984) Antibiotic resistance in 16S and 23S ribosomal RNA genes of <i>Escherichia coli</i> ; Nucl. Acids Res. 12: 4653-4663
AQ	Dower, W. J., et al. (1988) High efficiency transformation of <i>E. coli</i> by high voltage electroporation; Nucl. Acids Res. 16: 6127
AR	Wada et al. (1992) Codon usage tabulated from the GenBank genetic sequence data; Nucl. Acids Res. 20:2111-2118
AS	Capaldi, D. & Reese, C. (1994) Use of the 1-(2-fluorophenyl)-4-methoxypiperidin-4-yl (Fmp) and related protecting groups in oligoribonucleotide synthesis: stability of internucleotide linkages to aqueous acid; Nucl. Acids Res. 22:2209-2216
AT	Gutell, R. R. (1994) Collection of small subunit (16S- and 16S-like) ribosomal RNA structures: 1994; Nucl. Acids Res. 22: 3502-3507
AU	Chen, H., et al. (1994) Determination of the optimal aligned spacing between the Shine - Dalgarno sequence and the translation initiation codon of <i>Escherichia coli</i> mRNAs; Nucl. Acids Res. 22: 4953-4957
AV	Maidak, B. L. et al. (1996) The Ribosomal Database Project (RDP); Nucl. Acids Res. 24: 82-85
AW	O'Connor, M., et al. (2001) Mutagenesis of the peptidyltransferase center of 23S rRNA: the invariant U2449 is dispensable; Nucl. Acids Res. 29: 710-715
AX	O'Connor, M. et al. (2001) Enhancement of translation by the epsilon element is independent of the sequence of the 460 region of 16S rRNA; Nucl. Acids Res. 29: 1420-1425
AY	Sigmund, C. D. et al. (1982) Erythromycin resistance due to a mutation in a ribosomal RNA operon of <i>Escherichia coli</i> ; Proc. Natl. Acad. Sci. U.S.A. 79: 5602-5606

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AZ	de Boer, H. A., et al. (1983) The lac promoter: A functional hybrid derived from the <i>lrp</i> and <i>lac</i> promoters; Proc. Natl Acad. Sci. USA 80:21-25
BA	Tapprich, W. & Hill, W. (1986) Involvement of bases 787-795 of <i>Escherichia coli</i> 16S ribosomal RNA in ribosomal subunit association; Proc. Natl Acad. Sci. USA 83: 556-56
BB	Hui, A., et al. (1987) Specialized ribosome system: Preferential translation of a single mRNA species by a subpopulation of a mutated ribosomes in <i>Escherichia coli</i> ; Proc. Natl. Acad. Sci. U.S.A. 84: 4762-4766
BC	Carter-Muenchau, P. & Wolf, R. E. (1989) Growth-rate dependent regulation of 6-phosphogluconate dehydrogenase level mediated by an anti-Shine-Dalgarno sequence located within the <i>Escherichia coli</i> <i>gnd</i> structural gene; Proc. Natl. Acad. Sci. USA 86:1138-1142
BD	Tapprich, W., et al. (1989) Mutation at position 791 <i>Escherichia coli</i> 16S ribosomal RNA affects processes involved in the initiation of protein synthesis; Proc. Natl Acad. Sci. USA 86: 4927-4931
BE	Byrne and Ruddle (1989) Multiplex gene regulation: A two-tiered approach to transgene regulation in transgenic mice; Proc. Natl. Acad. Sci. USA 86:5473-5477
BF	Stormo, G. D., et al. (1982) Characterization of translational initiation sites in <i>E. coli</i> ; Nucleic Acids Res. 10: 2971-2996
BG	Broslus, J., et al. (1981) Construction and Fine Mapping of Recombinant Plasmids Containing the <i>mbB</i> Ribosomal RNA Operon of <i>E. Coli</i> ; Plasmid 6: 112-118
BH	Maden, B. E. (1990) The Numerous Modified Nucleotides in Eukaryotic Ribosomal RNA; Prog. Nucleic Acid Res. Mol. Biol. 39: 241-303
BI	Koosha, H., et al. (2000) Alterations in the peptidyltransferase and decoding domains of ribosomal RNA suppress mutations in the elongation factor G gene; RNA. 6: 1166-1173
BJ	Lee, K., et al. (1996) Genetic analysis of the Shine-Dalgarno interaction: Selection of alternative functional mRNA-rRNA combinations; RNA 2: 1270-1285
BK	Edlund et al. (1985) Cell-Specific Expression of the Rat Insulin Gene: Evidence for Role of Two Distinct 5' Flanking Elements; Science 230:912-916
BL	Kessel and Gruss (1990) Murine Developmental Control Genes; Science 249:374-379
BM	Higuchi, R. (1989) Using PCR to Engineer DNA; PCR Technology (Erlich, H.A., ed.), pp. 61-70, Stockton Press, New York
BN	Lee, K., et al. Genetic Approaches to Studying Protein Synthesis: Effects of Mutations at Pseudouridine 516 and A535 in <i>Escherichia coli</i> 16S rRNA. Symposium: Translational Control: A Mechanistic Perspective at the Experimental Biology 2001 Meeting (2001)
BO	Miller, J.H. (1992) Procedures for Working with <i>Jac</i> ; A Short Course in Bacterial Genetics, (Miller, J. H., ed.), pp. 71-80, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY

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